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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/646,345 | 08/22/2003 | Herwig Assler | 4547 | 8352 |

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EXAMINER

SEMUNEGUS, LULIT

ART UNIT PAPER NUMBER

3641

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,345

Applicant(s)

ASSLER ET AL.

Examiner

Lulit Semunegus

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 7-14 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reese, Jr (5,667,866) in view of Turner et al (5,106,668).

In regards to claims 1, 2, 8 and 10-14, Reese, Jr. teaches a lightweight structural component made of thin plies (20,22, 26, 28) that is uninterrupted throughout its area and at least one further sheet metal component (col. 3, lines 4-15) constructed as a frame work forming a lattice (12) with thickness within the range of .5mm to 5mm (col. 2, lines 53-55), a first adhesive bond between the thin ply and the lattice (col. 4, lines 10-12). Reese, Jr. does not teach the thin plies comprising of sheet metal. Turner et al teach a lightweight, laminated structural component comprising one sheet metal components comprising a ply that is uninterrupted throughout its area (52), a second sheet metal ply that is also uninterrupted throughout its area (54) to form a first ply structure and a first sheet metal lattice (22), a second sheet metal lattice (24) and a adhesive bond (col. 3, lines 16-26) between the first and second sheet metal lattice to form a second ply structure (fig. 2), and wherein the first and second ply structure is bonded by first adhesive bond (48). At the time of the invention, it would have been obvious to one ordinarily skilled in the art to have the thin plies made out of metal as

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taught in Turner et al and the lattice made out of sheet metal as taught in Reese, Jr since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice and wherein combining these two inventions teaches that having multiple plies involves only routine skill in the art.

In regards to claim 7, Reese, Jr. teaches the lattice comprising strip shaped lands forming at least one sheet metal ply with open fields surrounded by the strip shaped lands (the face of the honeycombs attached to the ply) and Reese, Jr. further teaches the use of the structure in an aircraft (col. 1, lines 5-28).

In regards to claim 9, Reese, Jr. and Turner et al teach that Alloys of aluminum is a known material used in lightweight, laminated structural component (Reese, Jr- col. 2, lines 43-53 and Turner et al – Col. 3, lines 4-15).

Allowable Subject Matter

3. Claims 3-6 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rhodes et al (4,052,523) teaches a lightweight, laminated structure component having a thin metal plies comprising a ply and lattice, and an adhesive bond between the ply and lattice.

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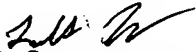
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lulit Semunegus whose telephone number is (571) 272-6882. The examiner can normally be reached on Mon-Friday.

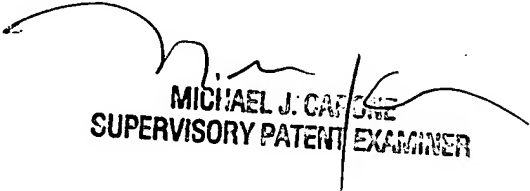
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (571) 272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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6/11/05


Lulit Semunegus
Examiner
Art Unit 3641


MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER